

THREE NEW SPECIES OF PROCTOTRUPOIDEA
(HYMENOPTERA)

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This article presents descriptions of three new species of Proctotrupeoidea, the first belonging to the family Scelionidae and the other two to the Diapriidae. Of particular interest is *Ceratobaeus ovivorus*, n. sp., reared from an egg case of the Brazilian spider *Ctenus rufibarbis* Franganillo, carried by the mother spider on bananas in a grocery store in St. Paul, Minnesota. The author is indebted to Professor Clarence E. Mickel for the opportunity to study this material and that of *Synacra insoleta*, n. sp.

Family SCELIONIDAE

Ceratobaeus ovivorus, n. sp.

This differs from *binotatus* Ashmead in having the body light reddish brown, without a dark spot on each side of the second tergite, and in having the anterior wing fasciate. In *binotatus* the head and thorax are very dark brown, the abdomen yellowish brown with a dark spot on each side of the second tergite, and the wings are not fasciate.

Female.—Length 1.95 mm. Head three times as high as thick, 1.2 times as wide as the thorax, 1.3 times as wide as high, and as seen from above flattened in front and deeply concave behind; ocelli small, the lateral ones touching the eye margins and less than their diameters distant from the sharp carina separating the vertex from the occiput; eye distant by 0.7 of its length from the base of the mandible; eye large, nearly circular, closely covered with short erect hairs; frons, vertex, mesonotum and scutellum closely irregularly punctate, subopaque, thickly covered with short hairs; scape nearly straight, cylindrical, about as long as the club, slightly thicker than the pedicel, the latter twice as long as thick and a little thicker than the funicular joints; third joint about as thick as long and as thick as any of the following three joints which are distinctly transverse; club composed of one piece but with three faint transverse lines indicating segmentation, about three times as thick as the pedicel; thorax 1.25 times as long as wide, as long as thick, strongly convex above; notauli short, widely separated; propodeum short, near perpendicular and provided with a thin lamella curving around the upper edge and extending straight down to the bases of the coxae on each side; this continuous thin plate, projecting at right angles to the surrounding surface, is widest above on each side and narrower medially and below; flattened surface enclosed by the lamella is of a proper size and shape to receive the anteriorly flattened horn of the petiole when the abdomen is raised to a horizontal position; abdomen 2.8 times as long as wide and 2.4 times as long as the thorax, depressed, twice as wide as thick, fusiform, pointed apically, flattened and with a narrow lateral flange below, finely and evenly longitudinally striate dorsally and laterally, the striae curving downward on the side beyond the middle; second tergite as long as wide basally, 1.7 times as wide at apex as long, the sides straight, deeply grooved on the basal two-fifths, the grooves shortening progressively toward the sides, the surface behind the grooves finely longitudinally striate as is also the surface of the third tergite; third tergite 1.2 times as

wide as long, 1.5 times as long as the second and nearly as long as the following three segments combined, the sides slightly curved; tergites four and five subequal in length, a little shorter than the sixth, finely reticulate except apically; last tergite one and one-fourth times as long as wide at base, triangular, pointed at apex, the surface with a faint indeterminate sculpture medially; wings extending a little past the apex of the third tergite and light brownish with a narrow fuscous band across the middle; body light reddish brown, the antennae (except club which is brownish) and legs yellowish brown.

Type locality.—Possibly Brazil.

Type and paratypes in the University of Minnesota collection; other paratypes in the U. S. National Museum and in the author's collection.

Described from thirty female specimens reared February 16–19, 1935 by D. Denning from an egg sac of *Ctenus rufibarbis* Franganillo. The spider, with its egg sac was found with bananas in a grocery store in St. Paul, Minnesota. W. J. Gertsch, authority on spiders, informed Professor Mickel that *Ctenus rufibarbis* occurs only in Brazil; so it is possible that both the spider and its parasites came from that country.

Family DIAPRIIDAE

Synaera insoleta, n. sp.

This may be distinguished from *S. canadensis* (Whittaker), the only other known Nearctic species of the genus, by its protruding mandibles and conspicuously abbreviated wings, and by having the propodeal carina incomplete and the propodeum and first tergite thickly hairy.

Female.—Length 2.29 mm. Head a little thicker (occiput to frons) than wide, with a prominent frontal ledge, somewhat longer (vertex to clypeus) than thick; frons rugulose just below insertion of antennae; head otherwise without sculpture; clypeus with a prominent ridge, on either side of which is a large deep fovea; mandibles long, directed downward, the tips barely crossing; maxillary palpus 3-jointed as in the type species, *S. brachialis* (Nees); the mandibles, however, very different from those of that species, narrow, bidentate at tips, the teeth blunt, the outer one slightly the longer; scape thick, not curved, slightly thinner basally, and with two short tooth-like projections opposite each other at apex, these projections, especially the outer one, distinct in both sexes; antennal joints beyond the fifth narrowed neck-like basally; length-width ratios of antennal joints: $\frac{30}{8} \frac{13}{7} \frac{12}{6} \frac{8}{6} \frac{8}{7} \frac{8}{7} \frac{8}{8} \frac{9}{10} \frac{10}{10} \frac{10}{10} \frac{18}{11}$; antennal pubescence short, mostly less than half the width of the joints; thorax somewhat narrower than head, twice as long as wide and thicker than wide; notauli complete, more finely impressed behind; scutellum transverse, subconvex, with a deep fovea between it and mesonotum; propodeum broadly transverse, with a smooth, rounded, median carina on anterior half; inferior face perpendicular, smooth; front wing abbreviated, extending a little past middle of abdomen, about twice as long as wide, broadly rounded apically, hyaline, thickly pubescent; tip of marginal vein nearly midway between base and apex of wing; marginal vein linear, about seven times as long as wide and about four times as long as the oblique radius; basal vein about as long as the marginal, light brownish, the median vein still paler brown;

abdomen 2.7 times as long as wide, 1.9 times as long as the thorax and 1.35 times as wide, widest on about apical third of second segment, gradually narrowing to a point distally; petiole 1.5 times as long as wide, second segment 1.7 times as long as the following segments combined; propodeum and petiole covered with rather long whitish hairs, which are less dense medially on both segments; body dark reddish brown; legs light yellowish brown; scape and pedicel light brownish, the flagellar joints much darker brown.

Male.—Length 2.01 mm. Similar to the female except as follows: Thorax as wide as head, 1.84 times as long as wide and a little thicker than wide; abdomen 2.3 times as long as long as wide, 1.16 times as wide as the thorax and 1.4 times as long as the thorax, elliptical as seen from above, gradually tapering to a blunt tip; second tergite 1.45 times as long as wide and about four times as long as the petiole; length-width ratios of antennal joints:

$$\frac{28}{8} \frac{13}{8} \frac{20}{8} \frac{12}{8} \frac{12}{7} \frac{12}{7} \frac{12}{7} \frac{12}{7} \frac{12}{7} \frac{12}{7}$$

$\frac{12}{7} \frac{12}{7} \frac{14}{6}$; length of antennal pubescence less than half the widths of the joints; third joint excised on proximal 0.7, 31 microns wide near base, gradually widening to apical 0.4; legs somewhat darker than in female; scape brown, flagellum fuscous. One male paratype differs somewhat from the allotype described above: The thorax is 1.73 times as long as wide; the abdomen is apparently swollen and is 1.75 times as long as wide, widest at apex of second segment, 1.3 times as wide and 1.3 times as long as the thorax, abruptly narrowing to a point posteriorly, the tip curved downward.

Type locality.—St. Paul, Minnesota.

Type and allotype in the collection of the University of Minnesota; paratypes in the author's collection and in the U. S. National Museum. Described from five females and three males reared in 1935 from galls on raspberry roots.

***Synacra canadensis* (Whittaker)**

Paratopsilus canadensis Whittaker, 1930. Proc. Ent. Soc. Wash. 32:73; Muesebeck and Walkley, 1951. In Muesebeck *et al.*, U. S. Dept. Agr., Agr. Monogr. No. 2:690.

Synacra canadensis Masner, 1964. Acta Soc. Ent. Cechosl. 61: 131.

The differences between this species and *insoleta*, n. sp., as detailed under the description of the latter just above, seem too significant, in the author's opinion, to be merely specific, although Dr. Masner, in the paper cited, indicates that such differences occur among other species now included in *Synacra*. Further study of these forms would seem to be indicated.

***Miota conformis*, n. sp.**

This species differs from Ashmead's description of *glabra*, to which it seems to be closely related, in having the last antennal joint one and one-half times (not twice) as long as the penultimate joint, and the body color dark brown to yellowish brown rather than black.

Female.—Length 3.3 mm. Body generally, except the petiole above and on the sides and the gaster, rather thickly clothed with short whitish hairs; head 1.3

times as wide as long, as wide as high and almost as wide as the thorax, 1.2 times as wide as the abdomen; antennae slender, filiform, with short whitish hairs; ratios of lengths of antennal joints: 35 : 7 : 25 : 18 : 16 : 15 : 14 : 12 : 11 : 10 : 10 : 10 : 10 : 14; average thickness of all joints 6; thickness of scape and last joint 7; thorax 1.6 times as long as wide, as wide as high and twice as long as the head; abdomen twice as long as the thorax; petiole three times as long as wide, smooth and shining, without sculpture except for a longitudinal carina on each side and two short inconspicuous carinae above near the apex; viewed from the side the petiole is slightly but distinctly bowed upward; it is, however, of approximately uniform thickness throughout; gaster 3.2 times as long as wide, as wide as high, decidedly compressed laterally toward apex, and composed of three segments, the first 1.7 times as long as the second and third together, and the third 1.8 times as long as the second; marginal vein 1.6 times as long as the radial cell, 1.3 times as long as the basal vein and as long as the cubitus, which is straight and parallel with the basal vein, continuing the line of the second abscissa of the radius; second abscissa of the radius about three times the length of the first; head, thorax and petiole blackish; first segment of gaster dark brown, second and third segments light yellowish brown, the extreme tip darker brown; antennae brown, the proximal three joints yellowish brown, the scape darker medially.

Type locality.—Westwood, California.

Type.—U. S. National Museum No. 67628

Described from twenty-five female specimens collected by the author in Stone Canyon, adjacent to the University of California campus, October 24 to November 8, 1935. They were on, or slowly flying around, various small plants at the borders of a little stream. Paratypes in the U. S. National Museum and in the author's collection.

REFERENCES

- Masner, L. 1964. A comparison of some Nearctic and Palearctic genera of Proctotrupoidea (Hymenoptera) with revisional notes. *Acta Soc. Ent. Cechosl.* 61: 123-155.
- Muesebeck, C. F. W. and L. M. Walkley. 1951. In Muesebeck *et al.*, Hymenoptera of America north of Mexico, Synoptic Catalog. U. S. Dept. Agr., Agr. Monogr. No. 2, 1420 pp.
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